

**Claims:**

1. An electroplating solution comprising an acidic aqueous solution of an oxalate, a phosphate and ammonium sulfate.

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2. The electroplating solution of claim 1 wherein the oxalate is oxalic acid and wherein the phosphate is trisodium phosphate.

3. The electroplating solution of claim 1 wherein the solution comprises  
10 oxalic acid, trisodium phosphate and ammonium sulfate present, respectively, in ratios by weight of 16-48 parts oxalic acid to 5-30 parts of trisodium phosphate and 2-10 parts ammonium sulfate.

4. The electroplating solution of claim 1 wherein the solution comprises  
15 oxalic acid, trisodium phosphate and ammonium sulfate present, respectively, in ratios by weight of 32 parts oxalic acid to 5-15 parts of trisodium phosphate and 4-8 parts ammonium sulfate.

5. The electroplating solution of claim 1 wherein the solution comprises  
20 oxalic acid, trisodium phosphate and ammonium sulfate present, respectively, in ratios by weight of 16-48 parts oxalic acid to 5-25 parts of trisodium phosphate and 4-8 parts ammonium sulfate.

6. The electroplating solution of claim 3 wherein the electroplating solution is free of chloride- or cyanide-containing compounds.

7. The electroplating solution of claim 4 wherein the electroplating solution is free of chloride- or cyanide-containing compounds.

8. The electroplating solution of claim 3 wherein the electroplating solution consists of water, oxalic acid, trisodium phosphate and ammonium sulfate.

9. The electroplating solution of claim 3 wherein no plating metal compounds, complexes or chelates are added to the electroplating solution.

10. A method of electroplating an article comprising:

providing an acidic aqueous electroplating solution between a plating metal anode and the article, the electroplating solution comprising an oxalate, a phosphate and ammonium sulfate; and

passing an electric current through the solution between the plating metal anode and the article.

11. The method of claim 10 wherein the electroplating solution comprises oxalic acid, trisodium phosphate and ammonium sulfate present, respectively, in ratios by

weight of 16-48 parts oxalic acid to 5-30 parts of trisodium phosphate and 2-10 parts ammonium sulfate.

12. The electroplating solution of claim 10 wherein the solution comprises  
5 oxalic acid, trisodium phosphate and ammonium sulfate present, respectively, in ratios by weight of 32 parts oxalic acid to 5-15 parts of trisodium phosphate and 4-8 parts ammonium sulfate.

13. The electroplating solution of claim 10 wherein the solution comprises  
10 oxalic acid, trisodium phosphate and ammonium sulfate present, respectively, in ratios by weight of 16-48 parts oxalic acid to 5-25 parts of trisodium phosphate and 4-8 parts ammonium sulfate.

14. The method of claim 10 wherein the electroplating solution consists of  
15 water, oxalic acid, trisodium phosphate and ammonium sulfate.

15. The method of claim 10 wherein the electroplating solution is free of plating metal compounds, complexes and chelates prior to the commencement of electroplating.

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16. The method of claim 10 wherein the plating metal anode and the article are at least partly immersed in a bath of the solution.

17. The method of claim 10 wherein the plating metal anode is at least partly covered with a layer of an absorbent material and wherein plating solution is absorbed into the absorbent material.

5 18. The method of claim 11 wherein the plating metal is chosen from the group consisting of brass, copper, nickel, zinc, silver, gold, iron, monel, lead and stainless steel.

19. The method of claim 11 wherein the article comprises a metal selected from the group consisting of aluminum, brass, copper, nickel, steel, lead, stainless steel  
10 and zinc.

20. The method of claim 11 wherein a second anode of a second plating metal is used, and wherein current is also passed through the solution between this anode and the article, whereby a plating is created on the substrate comprising metal from both the  
15 plating metal anode and the second plating metal anode.